| | | | | 0 |
|----|-----|----|---|----|
| 04 | - 9 | 98 | _ | 01 |

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032 Please type a plus sign (+) inside this box —

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE Inder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION **TRANSMITTAL**

21046-P004 Attorney Docket No. First Inventor Behrouz Farhang-Boroujeni METHOD AND APPARATUS FOR SEMI-BLIND COMMUNICATION CHANNEL ESTIMATION

| (Only for new nonprovisional applications under 37 CFR 1.53(| b)) | Express Mail Label No. EL743033932US | | | | | | |
|---|--|--|---|--------------------------|-------------|-------------------------|--|--|
| APPLICATION ELEMENTS | | ADDRESS TO: Assistant Commissioner for Patents Box Patent Application | | | | | | |
| See MPEP chapter 600 concerning utility patent application contr | 1 | | | Washingto | | | | |
| Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) | | 7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) | | | | | | |
| Applicant claims small entity status. | | | 8. Nucleotide and/or Amino Acid Sequence Submission | | | | | |
| See 37 CFR 1.27. New 37 CFR 1.27. Total Pages 30 | | (if applicable, all necessary) | | | | | | |
| (preferred arrangement set forth below) Descriptive title of the invention | | a Computer Readable Form (CRF) b. Specification Sequence Listing on: | | | | | | |
| Cross Reference to Related Applications | | b. Specification Sequence Listing on: i. | | | | | | |
| Statement Regarding Fed sponsored R & D Reference to sequence listing, a table, | | ii. paper | | | | | | |
| or a computer program listing appendix - Background of the Invention | | c. Statements verifying identity of above copies | | | | | | |
| Brief Summary of the Invention Brief Description of the Drawings (if filed) | j | AC | COMPANYII | NG APPI | ICATIO | ON PARTS | | |
| - Detailed Description | | 9. | Assignment Pa | apers (cove | r sheet & | document(s)) | | |
| - Claim(s) - Abstract of the Disclosure | _ | 10. | 37 CFR 3.73(I (when there is | | | Power of Attorney | | |
| 4. XX Drawing(s) (35 U.S.C. 113) [Total Sheets 7 |], | 11. 🔙 | English Trans | lation Docu | ıment (if a | | | |
| 5. Oath or Declaration UNSIGNED [Total Pages 3 | 7, | 12. | Information D Statement (ID | | 49 | Copies of IDS Citations | | |
| a. Newly executed (original or copy) | | 13. | Preliminary A | , | | | | |
| Copy from a prior application (37 CFR 1.63 (d)) b. (for continuation/divisional with Box 18 completed) | | | 14. XX Return Receipt Postcard (MPEP 503) (Should be specifically itemized) | | | | | |
| i. DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) | | | 15. Certified Copy of Priority Document(s) (if foreign priority is claimed) | | | | | |
| named in the prior application, see 37 CFR 1 63(d)(2) and 1 33(b). | | 16. XX | Request and | | | | | |
| | | | or its equivale | | si allacri | form PTO/SB/35 | | |
| 6. Application Data Sheet. See 37 CFR 1.76 | | | Other: | | | ······ | | |
| 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76: | | | | | | | | |
| Continuation Divisional Continuation-in-part | (CIP) | of pr | or application No :_ | | | | | |
| Prior application information: Examiner | _ | | oup Art Unit | | | | | |
| For CONTINUATION OR DIVISIONAL APPS only: The entire disclosur Box 5b, is considered a part of the disclosure of the accompanying or | ontinuation | or divisio | nal application a | and is hereb | y incorpo | | | |
| The incorporation can only be relied upon when a portion has been in | | | | ed application | on parts. | | | |
| 19. CORRESPONDENCE ADDRESS | | | | | | | | |
| Customer Number or Bar Code Label ((fisent Customer No. or Attacht bar code label nere) or Correspondence address below | | | | | | | | |
| Name COLUMBIA IP LAW GRO | UP, LL | С | | | | | | |
| 4900 SW Meadows Road, Suite 109 | | | | | | | | |
| Address | - , - | | | | | | | |
| City Lake Oswego | Lake Oswego Sta | | | State Oregon Zip Code 97 | | | | |
| Country USA | Telepho | ne 5 (|)3-534-28 | 00 | Fax 5 | 03-534-2804 | | |
| Name (Print/Type) Robert/A. Diehl, | Robert A. Diehl Registration No. (Attorney/Agent) 40,992 | | | | 0,992 | | | |
| | MA | | | | | | | |

Burden Hour Statement This form is estimated to take 0 Chours to complete Time will vary depending upon the needs of the individual case Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS SEND TO Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231

PTO/SB/17 (11-00)
Approved for use through 10/31/2002. OMB 0651-0032
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision

TOTAL AMOUNT OF PAYMENT

(\$) 0.00

| Complete if Known | | |
|----------------------|---------------------------|--|
| Application Number | Not Yet Assigned | |
| Filing Date | February 6, 2001 | |
| First Named Inventor | Behrouz Farhang-Boroujeni | |
| Examiner Name | Not Yet Assigned | |
| Group Art Unit | Not Yet Assigned | |
| Attorney Docket No. | 21046-P004 | |

| METHOD OF PAYMENT | FEE CALCULATION (continued) | | | | | |
|--|-----------------------------|-----------------|----------|----------------|--|----------|
| The Commissioner is hereby authorized to charge indicated | | ITIONAL | L FEE | 3 | | |
| The state of the s | | Large Entity | | Smal Entity | | |
| Account 501569 | Fee | Fee | Fee | Fee | | F D-14 |
| Number | Code | (\$) | Code | (\$) | Fee Description | Fee Paid |
| Account Columbia IP Law Group, LLC | 105 | 130 | 205 | 65 | Surcharge - late filing fee or oath | |
| Name | 127 | 50 | 227 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| Charge Any Additional Fee Required Under 37 CFR 1 16 and 1 17 | 139 | 130 | 139 | 130 | Non-English specification | |
| Applicant claims small entity status See 37 CFR 1 27 | 147 | 2,520 | 147 | 2,520 | For filing a request for ex parte reexamination | |
| | 112 | 920* | 112 | 920* | Requesting publication of SIR prior to Examiner action | |
| 2. Payment Enclosed: Check Credit Card Money Other | | 1,840* | 113 | 1,840* | Requesting publication of SIR after Examiner action | |
| FEE CALCULATION | 115 | 110 | 215 | 55 | Extension for reply within first month | |
| | 116 | 390 | 216 | 195 | Extension for reply within second month | |
| 1.BASIC FILING FEE Large Entity Small Entity | 117 | 890 | 217 | 445 | Extension for reply within third month | |
| Fee Fee (\$) Fee Fee Fee Description | 118 | 1,390 | 218 | 695 | Extension for reply within fourth month | |
| Code Code (\$) Fee Paid 101 710 201 355 Utility filing fee 355.00 | 128 | 1,890 | 228 | 945 | Extension for reply within fifth month | |
| 106 320 206 160 Design filing fee | 119 | 310 | 219 | 155 | Notice of Appeal | |
| 107 490 207 245 Plant filing fee | 120 | 310 | 220 | 155 | Filing a brief in support of an appeal | |
| 108 710 208 355 Reissue filing fee | 121 | 270 | 221 | 135 | Request for oral hearing | |
| 114 150 214 75 Provisional filing fee | 138 | 1,510 | 138 | 1,510 | Petition to institute a public use proceeding | |
| SUBTOTAL (1) (\$) 355.00 | 140 | 110 | 240 | 55 | Petition to revive - unavoidable | |
| | 141 | 1,240 | 241 | 620 | Petition to revive - unintentional | |
| 2.EXTRA CLAIM FEES Fee from | 142 | 1,240 | 242 | 620 | Utility issue fee (or reissue) | |
| Extra Claims below Fee Paid | 143 | 440 | 243 | 220 | Design issue fee | |
| Total Claims 41 -20**= 21 X 9 00 = 189.00 | 144 | 600 | 244 | 300 | Plant issue fee | |
| Independent | 122 | 130 | 122 | 130 | Petitions to the Commissioner | |
| | 123 | 130 | 123 | 130 | Petitions related to provisional applications | |
| Multiple Dependent = 0.00 | 126 | 180 | 126 | 180 | Submission of Information Disclosure Stmt | |
| Large Entity Small Entity Fee Fee Fee Fee Description | 581 | 40 | 581 | 40 | Recording each patent assignment per property (times number of properties) | |
| Code (\$) Code (\$) 103 18 203 9 Claims in Excess of 20 | 146 | 710 | 246 | 355 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 102 80 202 40 Independent claims in excess of 3 104 270 204 135 Multiple dependent claim, if not paid | 149 | 710 | 249 | 355 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| 109 80 209 40 ** Reissue independent claims over | 179 | 710 | 279 | 355 | Request for Continued Examination (RCE) | |
| original patent 110 18 210 9 ** Reissue claims in excess of 20 and over | 169 | 900 | 169 | 900 | Request for expedited examination of a design application | |
| onginal patent | Other fe | e (specify) | _ | | or a design approaction | |
| SUBTOTAL (2) (\$) 229.00 **or number previously paid, if greater; For Reissues, see above | *Reduced | by Basic Fi | ling Fee | Paid | SUBTOTAL (3) (\$) 0 | .00 |

| SUBMITTED BY | | | | Complete (if ap | plicable) |
|-------------------|------------------|--------------------------------------|--------|-----------------|------------------|
| Name (Print/Type) | Robert A. Diehl | Registration No. (Attorney/Agent) | 40,992 | Telephone | 503-534-2800 |
| Signature | - Ment (V. VAAA) | / | | Date | February 6, 2001 |

WARNING: Information on this form may become public. Credit card information should not

be included on this form. Provide credit card information and authorization on PTO-2038

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO. Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/35 (11-00)
Approved for use through 10/31/2002. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

REQUEST AND CERTIFICATION UNDER 35 U.S.C. 122(b)(2)(B)(i)

| First Named Inventor | | Behrouz Farhang-Boroujeni |
|----------------------|--|---|
| Title METHOD AND A | | APPARATUS FOR SEMI-BLIND ON CHANNEL ESTIMATION |
| Atty Docket Number | | 21046-P004 |

I hereby certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing. I hereby request that the attached application not be published under 35 U.S.C. 122(b).

2/6/2001 Date

Robert A. Diehl, Reg. No. 40,992
Typed or printed name

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing**.

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

Burden Hour Statement: This collection of information is required by 37 CFR 1 213(a) The information is used by the public to request that an application not be published under 35 U.S.C. 122(b) (and the PTO to process that request). Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1 14. This form is estimated to take 6 minutes to complete This time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO. Assistant Commissioner for Patents, Washington, DC 20231.